MANUFACTURER'S SUGGESTED SCHEDULED MAINTENANCE

SCHEDULED MAINTENANCE INTERVAL

Model Year	(1) Interval
1998-99	60,000
2000	40,000
2001 (2)	40,000
2001 (3)	60,000
2002	80,000
2003-04	100,000

(1) Replace timing belt and tensioner together.

(2) Models equipped with automatic transmissions.

(3) Models equipped with manual transmission.

REMOVAL & INSTALLATION

CAUTION: This application is an interference engine. Do not rotate camshaft or crankshaft when timing belt is removed, or engine damage may occur.

TIMING BELT

Removal (Golf & Jetta)

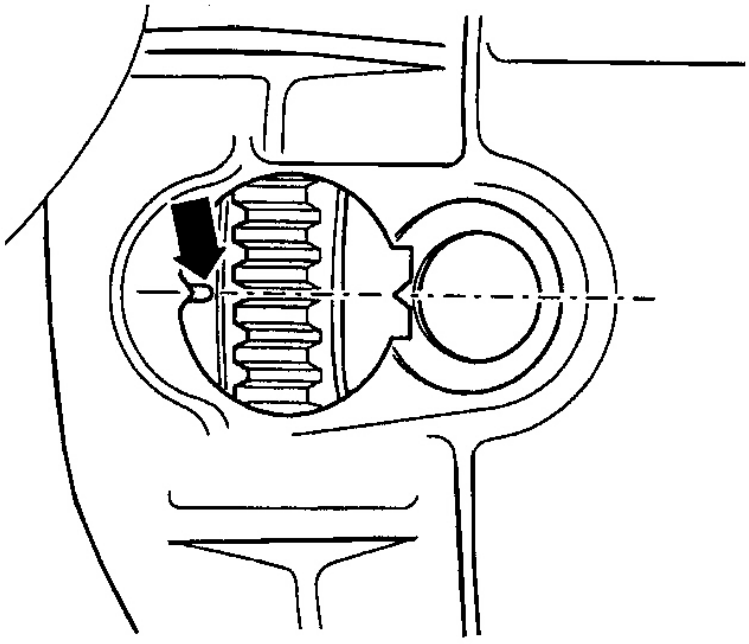
NOTE: Timing belt installation procedure requires using a factory scan tester (VAG 1551/1552) to adjust injection pump timing.

1. Working under hood, remove fuel supply and return lines from fuel filter. Seal fuel lines to prevent contamination of fuel system. Remove upper and lower right headlight assembly mounting screws. Disconnect harness connectors and remove right headlight assembly.
2. Remove pipe between charge air cooler (intercooler) and intake manifold. Remove upper engine cover. Remove right sound damper cover.
3. If serpentine belt is to be reused, mark rotational direction of belt. Using a 16 mm box wrench, rotate serpentine belt tensioner clockwise to relieve belt tension, and remove serpentine belt. Remove serpentine belt tensioner.
4.

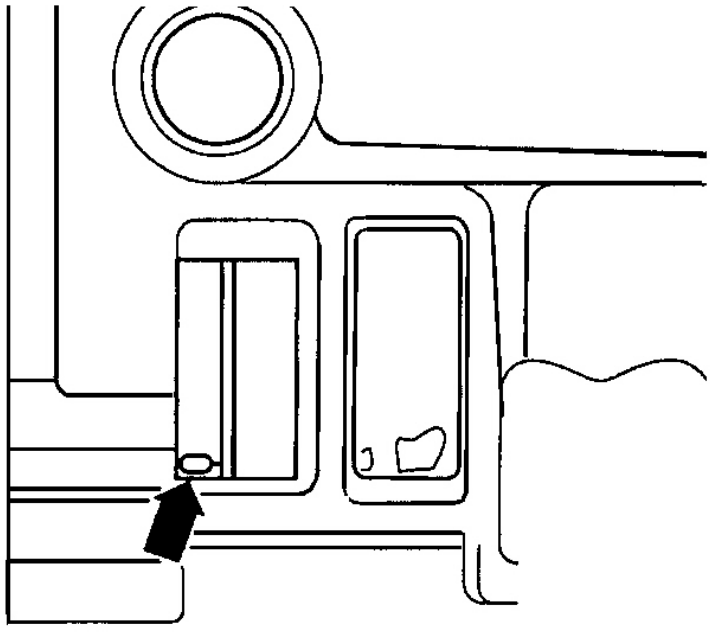
CAUTION: The valve cover has an integrated, vulcanized gasket. If gasket is damaged or leaking, replace the valve cover.

Remove brake booster vacuum pump. Remove upper timing belt cover. Remove engine valve cover using care not to damage gasket.

5. Rotate crankshaft so that No. 1 cylinder is at TDC of compression stroke. TDC mark can be viewed through access hole in engine-to-transmission mating flange. See **Fig. 1** .
6. Lock camshaft in place with Camshaft Setting Bar (3418) installed on rear of camshaft. See **Fig. 2** . Center setting bar by turning camshaft so one side of setting bar contacts cylinder head. Using feeler gauge, measure distance between other end of setting bar and cylinder head. Divide this dimension in half. Place a feeler gauge corresponding to half the bar-to-cylinder head dimension between setting bar and cylinder head. Turn camshaft until setting bar contacts feeler gauge. Place second feeler gauge of same dimension between other end of bar and cylinder head.



MANUAL TRANSMISSION



AUTOMATIC TRANSMISSION

99D54448

Fig. 1: Locating TDC Mark on Flywheel/Flexplate
Courtesy of VOLKSWAGEN UNITED STATES, INC.

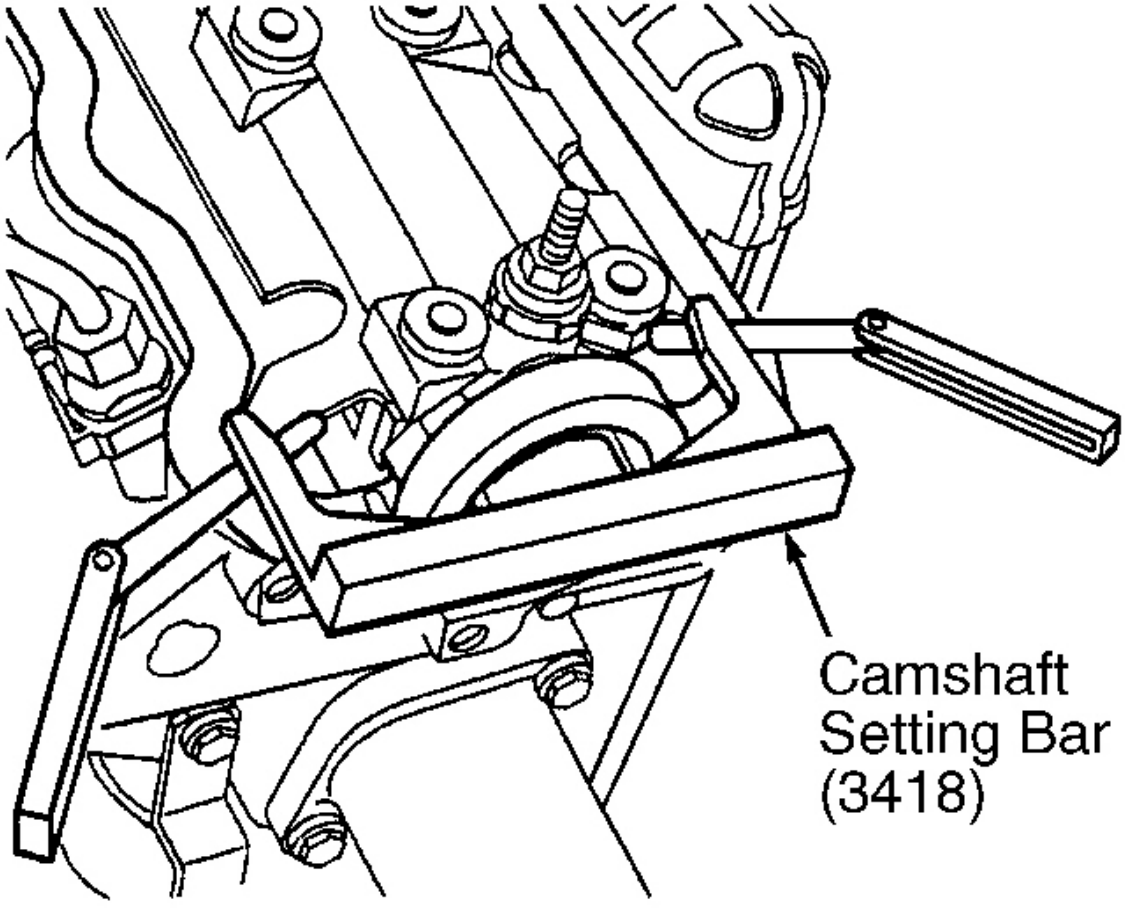


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Fig. 2: Locking Camshaft With Setting Bar
Courtesy of VOLKSWAGEN UNITED STATES, INC.

7. Lock injection pump in place using Lock Pin (3359). See **Fig. 3** .
8. **CAUTION: DO NOT loosen diesel injection pump center hub nut. This will alter injection pump basic setting.**

   Loosen, but do not remove, the 3 diesel injection pump sprocket mounting bolts. Replace these bolts with NEW bolts during installation. Attach Engine Support (10-222A) with legs (10-222A/1) or equivalent. Remove coolant reservoir bottle and power steering reservoir, and leaving hoses attached set aside.
9. **CAUTION: Crankshaft pulley CENTER bolt is a torque-to-yield bolt. This bolt MUST be replaced if loosened or removed.**

   Remove engine mount from timing belt end of engine. Remove 4 crankshaft pulley socket-head bolts and remove crankshaft pulley (it is not necessary to remove center bolt). Remove middle and lower timing

belt covers. Remove engine mount bracket.

10.

CAUTION: DO NOT turn camshaft or crankshaft with drive belt removed.

If reusing old timing belt, mark belt with arrow to indicate original direction of rotation. Loosen timing belt tensioner lock nut. Turn tensioner to release belt and remove timing belt.

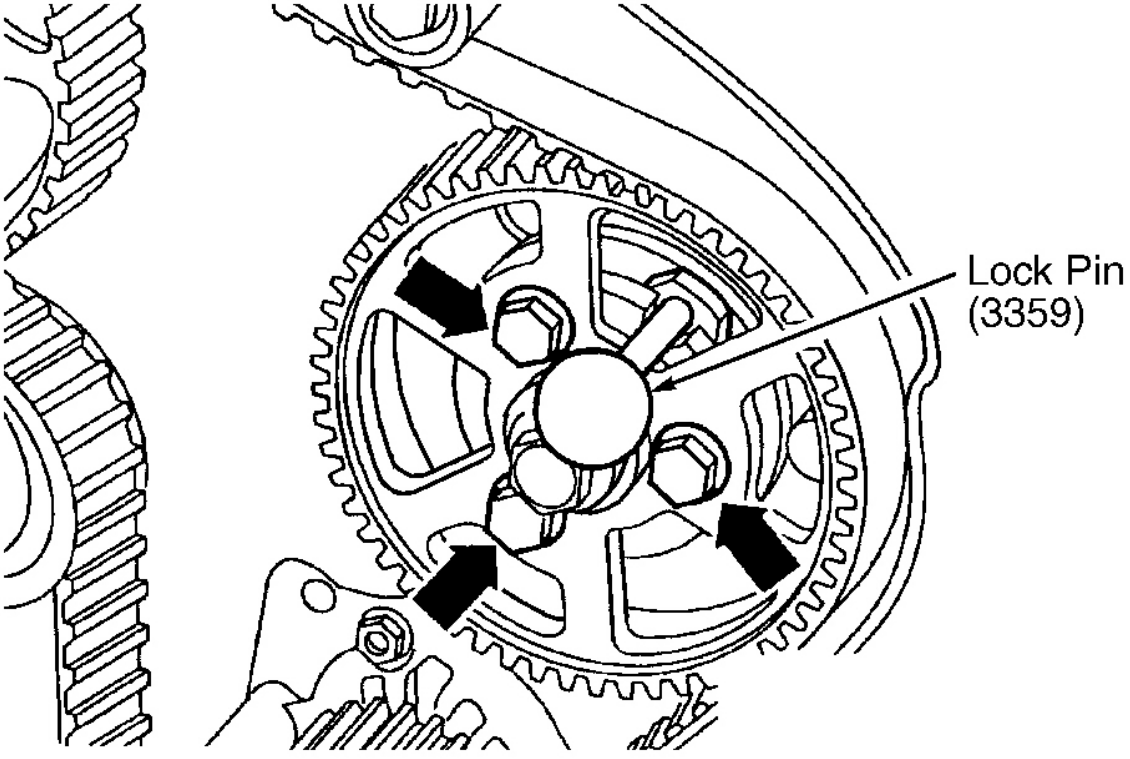

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Fig. 3: Locking Diesel Fuel Injection Pump Sprocket
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Removal (New Beetle)

1. Remove tube between charge air cooler and air intake pipe. Disconnect and plug fuel supply and return lines at fuel filter. Remove fuel filter from bracket.
2. **CAUTION: The valve cover has an integrated, vulcanized gasket. If gasket is damaged or leaking, replace the valve cover.**

   Remove upper timing belt cover. Remove valve cover. Remove brake booster vacuum pump. Remove pipe between charge air cooler and turbocharger.

3. If serpentine belt is to be reused, mark rotational direction of belt. Using a 16 mm box wrench, rotate serpentine belt tensioner clockwise to relieve belt tension, and remove serpentine belt. Remove serpentine belt tensioner.
4. Rotate crankshaft so that No. 1 cylinder is at TDC of compression stroke. TDC mark can be viewed through access hole in engine-to-transmission mating flange. See **Fig. 1** .
5. Lock camshaft in place with Camshaft Setting Bar (3418) installed on rear of camshaft. See **Fig. 2** . Center setting bar by turning camshaft so one side of setting bar contacts cylinder head. Using feeler gauge, measure distance between other end of setting bar and cylinder head.
6. Divide this dimension in half. Place a feeler gauge corresponding to half the bar-to-cylinder head dimension between setting bar and cylinder head. Turn camshaft until setting bar contacts feeler gauge. Place second feeler gauge of same dimension between other end of bar and cylinder head.
7. Lock the injection pump in place using Lock Pin (3359). See **Fig. 3** .
8. **CAUTION: DO NOT loosen diesel injection pump center hub nut. This will alter injection pump basic setting.**

   NOTE: The 3 diesel injection pump bolts are torque-to-yield type. Manufacturer recommends replacing bolts during final assembly.

   Loosen, but do not remove, the 3 diesel injection pump sprocket mounting bolts. Manufacturer recommends replacing these torque-to-yield bolts during final assembly. Support engine weight from above or below with floor jack.
9. **NOTE: On New Beetle, engine mount bolts are torque-to-yield type. Manufacturer recommends replacing bolts if they are loosened or removed.**

   Remove engine mount from timing belt end of engine.
10. **CAUTION: Crankshaft pulley CENTER bolt is a torque-to-yield bolt. This bolt MUST be replaced if loosened or removed.**

    Remove 4 crankshaft pulley socket-head bolts, and remove crankshaft pulley (it is not necessary to remove center bolt). Remove timing belt covers.
11. **CAUTION: DO NOT turn camshaft or crankshaft with drive belt removed.**

    If reusing old timing belt, mark belt with arrow to indicate original direction of rotation. Loosen timing belt tensioner lock nut. Turn tensioner to release belt and remove timing belt.

Installation (All Models)

NOTE: Timing belt installation procedure requires using a factory scan tester (VAG 1551/1552) to adjust injection pump timing.

1. Ensure cylinder No. 1 is at TDC. Check reference mark on flywheel and bellhousing. See **Fig. 1** .
2. **CAUTION: Use Spanner Wrench (3036) to hold camshaft sprocket while loosening and tightening camshaft sprocket bolt. DO NOT use Camshaft Setting Bar (3418) to hold camshaft sprocket.**

   Using Spanner Wrench (3036) counter-hold camshaft and loosen camshaft sprocket bolt 1/2 turn. See **Fig. 4** . On New Beetle, place drift punch through rear timing belt cover and LIGHTLY tap camshaft sprocket loose from tapered end of camshaft. On Golf and Jetta, use a Two Arm Puller (T40001) to remove sprocket. Remove camshaft sprocket.
3. Install timing belt onto crankshaft sprocket, idler pulley, water pump, injection pump sprocket, and tensioner pulley. Adjust injection pump sprocket on mount so mounting slots are centered. If installing old belt, note direction of rotation mark.
4. Install camshaft sprocket together with timing belt. Install camshaft sprocket bolt finger tight. Camshaft sprocket should still be free to turn.
5. On Golf and Jetta with automatic transaxle, use an Allen wrench to turn timing belt tensioner clockwise until notch and pointer align. See **Fig. 5** . If tensioner is turned too far and correct tension is exceeded, tension must be fully released, and then readjusted. Tighten center lock nut on tensioner pulley to specification. See **TORQUE SPECIFICATIONS** .
6. On Golf and Jetta with manual transaxle and New Beetle, install Tension Pin Wrench (MATRA V159) on timing belt tensioner pulley. See **Fig. 6** . Turn wrench clockwise until notch and raised mark are aligned. Tighten tensioner pulley center nut to specification. See **TORQUE SPECIFICATIONS** .
7. On all models, ensure tensioner is correctly installed in rear timing belt cover. See **Fig. 7** . Ensure TDC marks on flywheel are still aligned. Using Spanner Wrench (3036) counter-hold camshaft and tighten camshaft sprocket center bolt to specification. See **TORQUE SPECIFICATIONS** .
8. Install NEW torque-to-yield mounting bolts in diesel injection pump sprocket. Tighten injection pump bolts to 15 ft. lbs. (20 N.m). Before final tightening of injection pump mounting bolts, perform start of injection procedure (dynamic timing) using factory scan tester (VAG 1551/1552). After performing start of injection procedure, tighten injection pump sprocket mounting bolts an additional 90 degrees (1/4 turn).
9. Remove camshaft setting bar from rear of camshaft. Remove lock pin from injection pump.
10. Rotate crankshaft 2 complete revolutions. Place crankshaft at TDC and ensure belt timing is correct. Ensure timing belt tensioner pulley marks are still aligned.
11. To complete installation, reverse removal procedure. When installing engine mount, install mounting bolts in holes on bracket before attempting to fit bracket to engine block. Tighten nuts and bolts to specification. See **TORQUE SPECIFICATIONS** . Check fuel lines for leaks. Adjust drive belts to proper tension.
12. Using scan tester (VAG 1551/1552), check Diesel injection pump start of delivery.

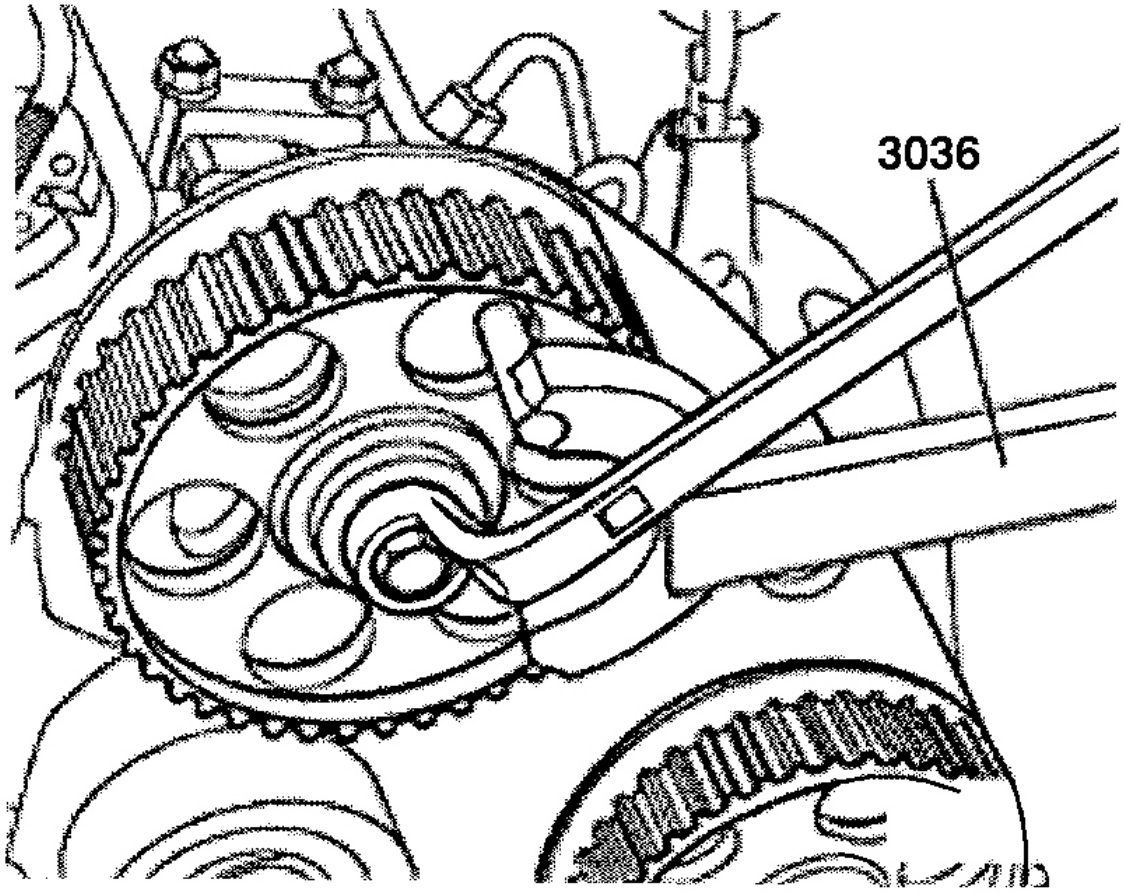

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Fig. 4: Securing Camshaft Sprocket
Courtesy of VOLKSWAGEN UNITED STATES, INC.

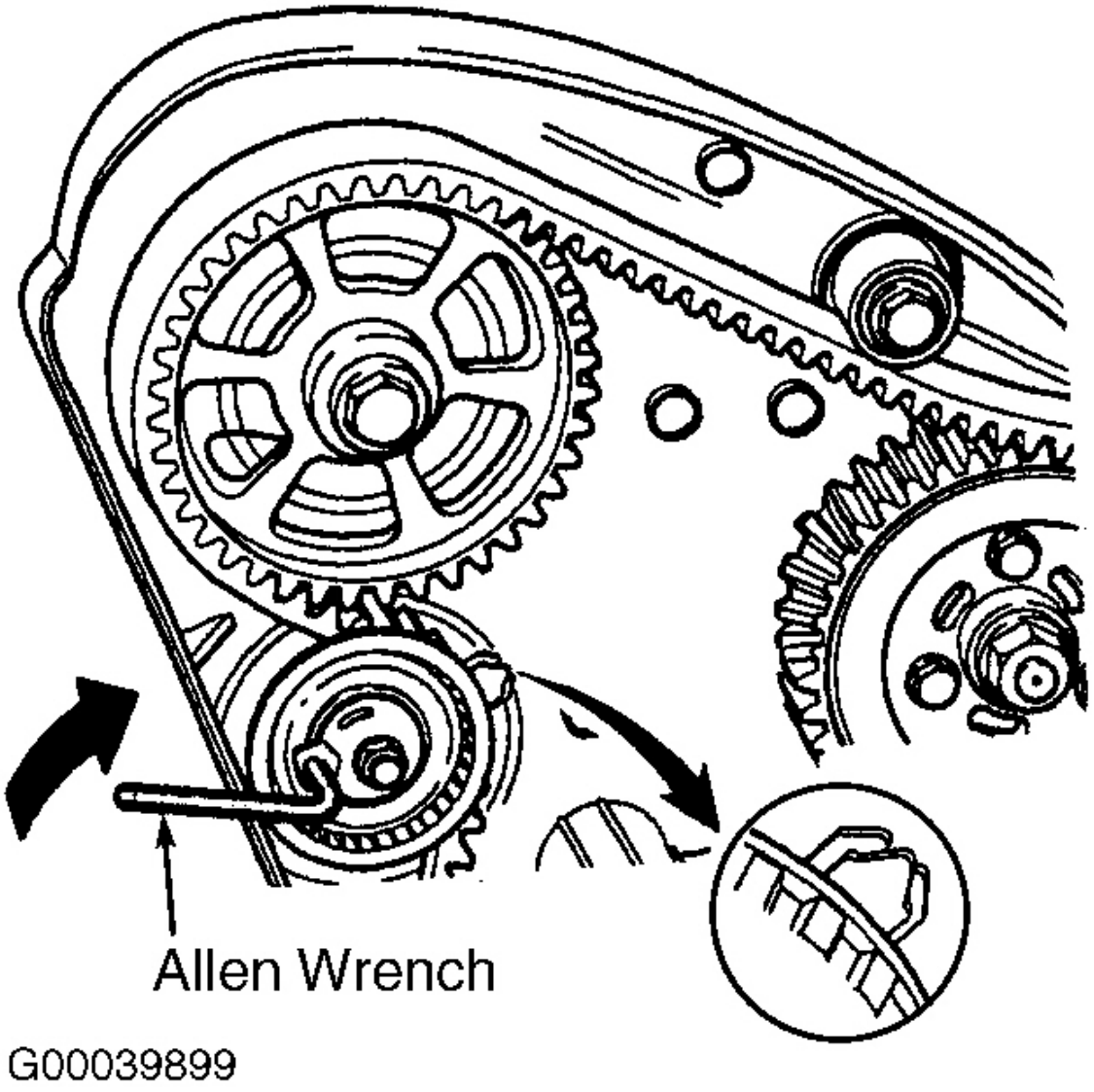

Fig. 5: Adjusting Timing Belt Tension (Golf & Jetta With Automatic Transaxle)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

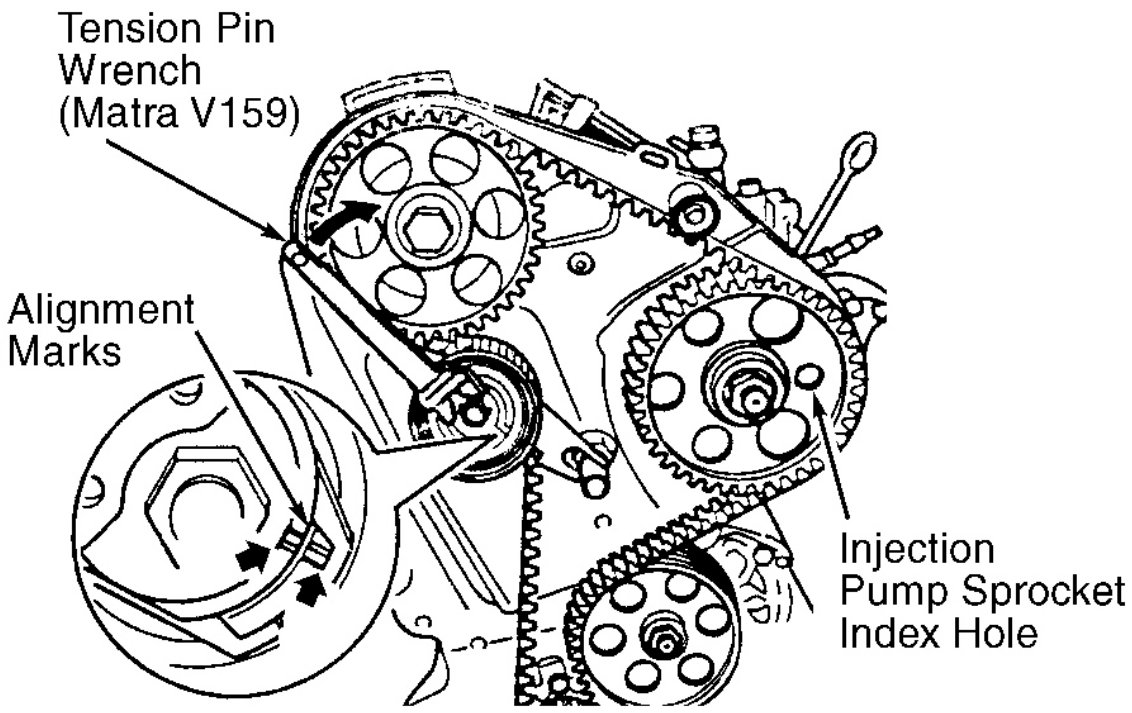

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Fig. 6: Adjusting Timing Belt Tension (Golf & Jetta With Manual Transaxle, & New Beetle)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

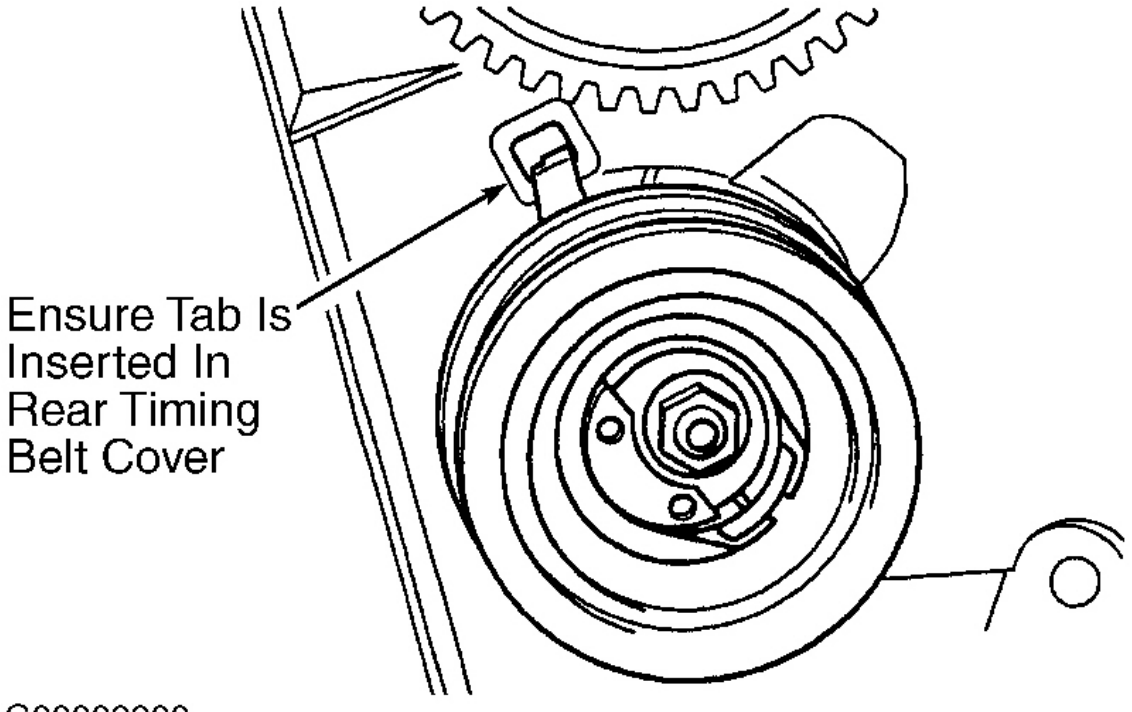

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Fig. 7: Installing Timing Belt Tensioner

Courtesy of VOLKSWAGEN UNITED STATES, INC.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS (GOLF & JETTA)

Application	**Ft. Lbs. (N.m)**
Camshaft Sprocket Bolt	33 (45)
Crankshaft Pulley Bolt	18 (25)
Diesel Injection Pump Sprocket Bolts (1)	15 (20) + 90 Degrees
Engine Mount Bracket-To-Engine Bolt	33 (45)
Idler Pulley Bolt	15 (20)
Serpentine Drive Belt Tensioner	18 (25)
Timing Belt Tensioner Pulley Nut	15 (20)
Vacuum Pump Bolt	15 (20)
Water Pump Bolts	16 (22)
	INCH. Lbs. (N.m)
Timing Belt Cover Bolt	89 (10)
Valve Cover Nut	89 (10)
(1) Replace with new torque-to-yield bolts on installation.	

TORQUE SPECIFICATIONS (NEW BEETLE)

Application	**Ft. Lbs. (N.m)**
Camshaft Sprocket Bolt	33 (45)
Crankshaft Pulley Bolt	18 (25)
Diesel Injection Pump Sprocket Bolts (1)	15 (20) + 90 Degrees
Engine Mount Bracket-To-Engine Bolt (1)	30 (40) + 90 Degrees
Engine Mount-To-Bracket Bolt (1)	44 (60) + 90 Degrees
Idler Pulley Bolt	15 (20)
Timing Belt Tensioner Pulley Nut	15 (20)
Water Pump Bolts	11 (15)
	INCH Lbs. (N.m)
Timing Belt Cover Bolt	89 (10)
Valve Cover Nut	89 (10)
(1) Replace with new torque-to-yield bolts on installation.	

VOLKSWAGEN

2.0L 4-Cylinder - AEG, AVH, AZG, BDC & BEV Engines

MANUFACTURER'S SUGGESTED SCHEDULED MAINTENANCE

For 1998-00 model years, although the manufacturer does not recommend a specific scheduled maintenance interval, belt manufacturers suggest the belt be replaced at 60,000 mile intervals. For 2001-03 model years, the manufacturer recommends the belt be replaced at 105,000 mile intervals.

NOTE: For 2004, manufacturer does not provide a timing belt replacement interval.

REMOVAL & INSTALLATION

CAUTION: This application is an interference engine. Do not rotate camshaft or crankshaft when timing belt is removed, or engine damage may occur.

NOTE: Engine code AEG is stamped into machined pad on front of cylinder block above crankcase breather, near cylinder head mating surface. See Fig. 1 . For all other 2.0L engines, engine code is stamped on transmission mating flange at the rear of the engine. See Fig. 2 . For all engines, code can also be found on the vehicle data plate and on a sticker on the timing belt cover.

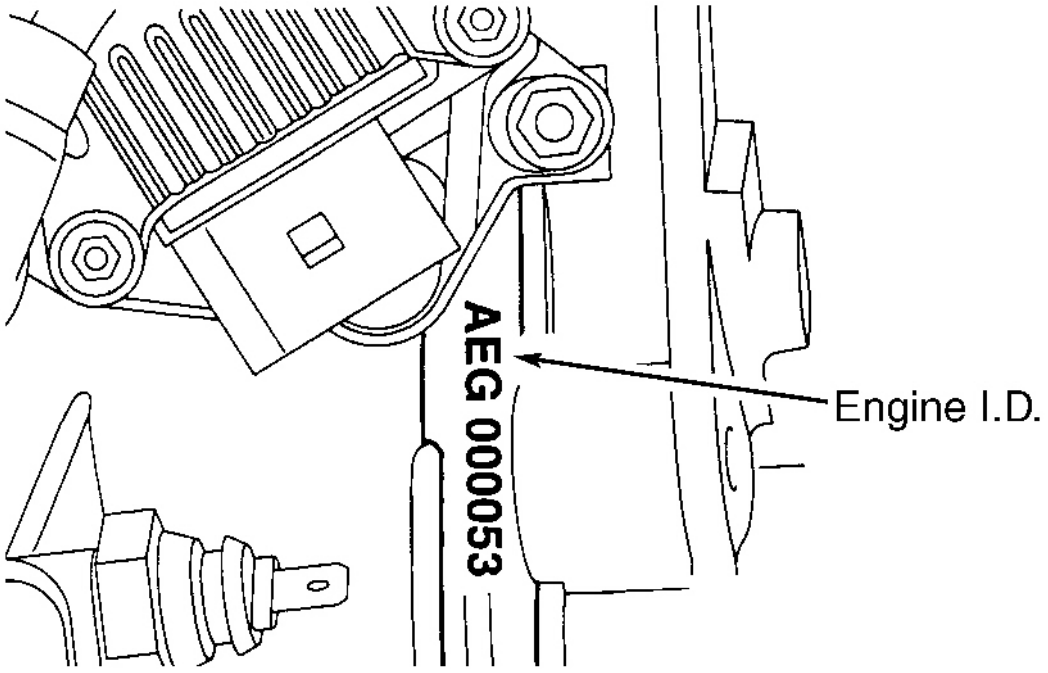

Fig. 1: Locating Engine Identification Code (AEG)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

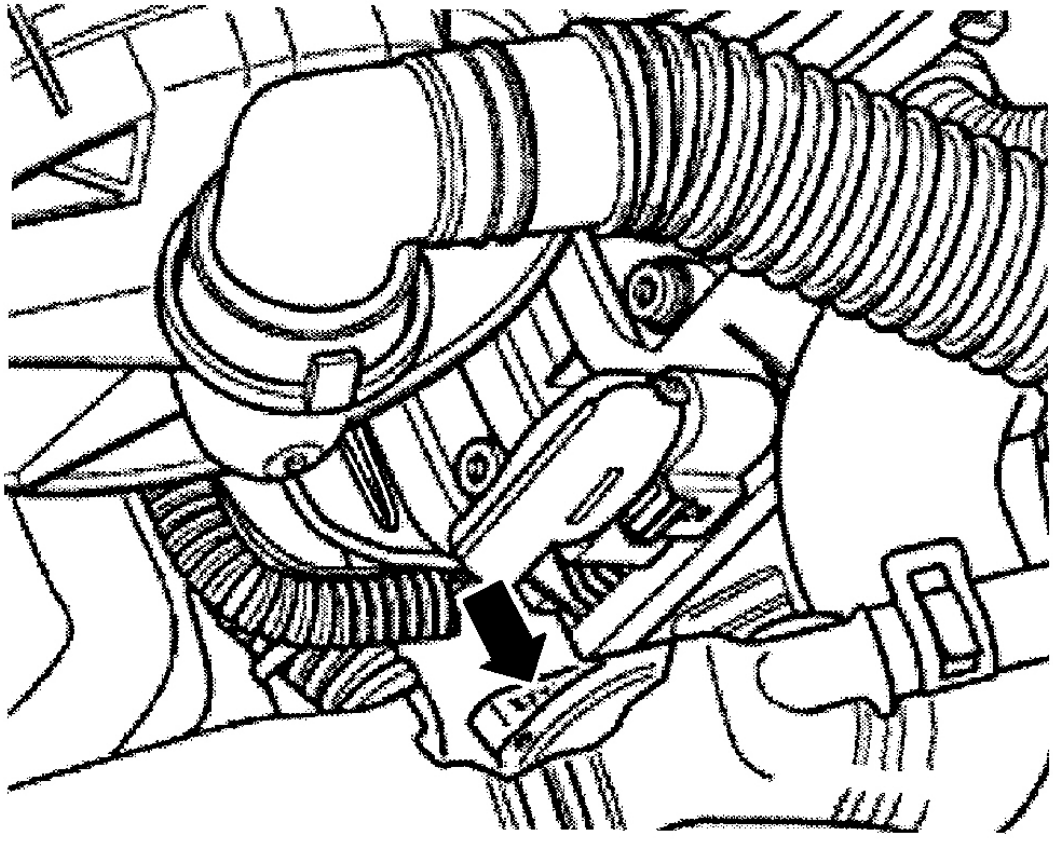

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Fig. 2: Locating Engine Identification Code (AVH, AZG, BDC & BEV)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

TIMING BELT

Removal (AEG, AVH, AZG, BEV & BDC Engine Codes)

1. Remove right hand insulation tray from engine compartment. Remove engine cover. Rotate serpentine belt tensioner clockwise to relieve belt tension. Remove serpentine belt. See **Fig. 3** . Lock in place using Mandrel (T10060) or a drift.

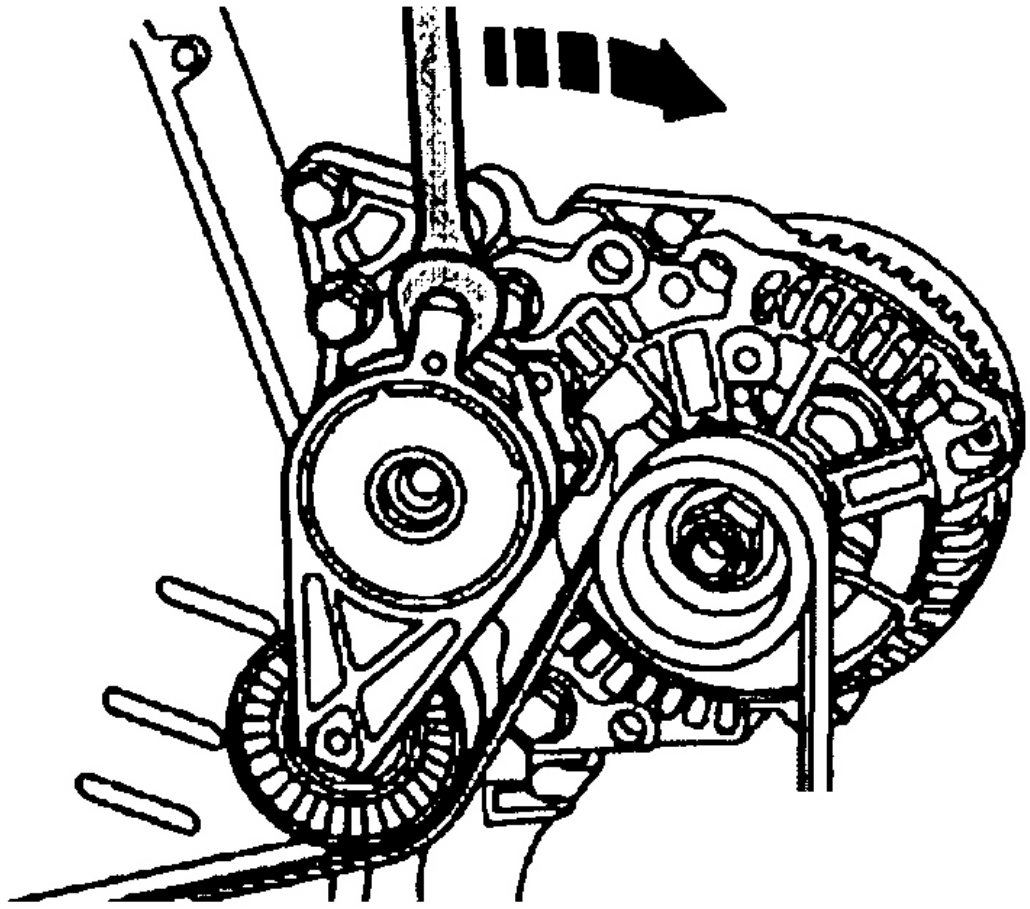


Fig. 3: Releasing Serpentine Belt Tensioner
Courtesy of VOLKSWAGEN UNITED STATES, INC.

2. Remove serpentine belt tensioner assembly. See **Fig. 4** . Turn crankshaft to TDC position. See **Fig. 5** . Align TDC marks visible in bellhousing access hole. See **Fig. 6** . Remove upper timing belt cover. Ensure camshaft sprocket timing mark aligns with mark on rear cover. See **Fig. 5** .
3. Support engine from above or below with floor jack to take engine weight off of mounts. Remove coolant reservoir and set aside. On Golf and Jetta, remove power steering reservoir (hoses attached), and set aside. On New Beetle, pull off EVAP hoses at EVAP canister and throttle valve housing.
4. On all models, remove engine mount from timing belt end of engine. See **Fig. 7** . Remove crankshaft pulley from crankshaft sprocket. It is NOT necessary to remove center bolt (center bolt is torque-to-yield type that must be replaced if removed).
5. Remove timing belt covers. Remove engine support from front of engine. See **Fig. 4** .

6.

CAUTION: To prevent valves from contacting piston, DO NOT rotate camshaft or crankshaft with timing belt removed.

If reusing old belt, mark belt with arrow to indicate original direction of rotation. Loosen timing belt tensioner nut and rotate timing belt tensioner away from belt to remove timing belt. See **Fig. 8** .

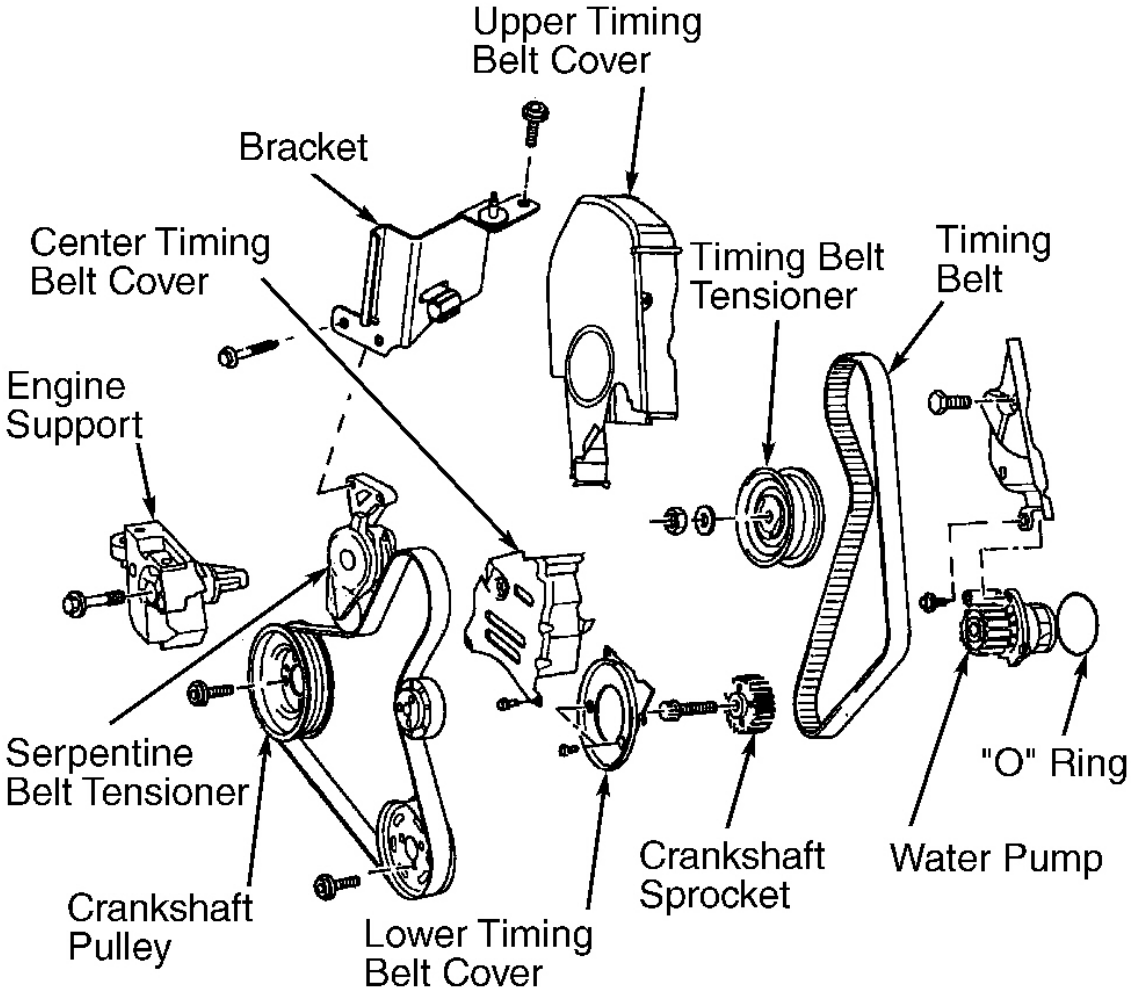
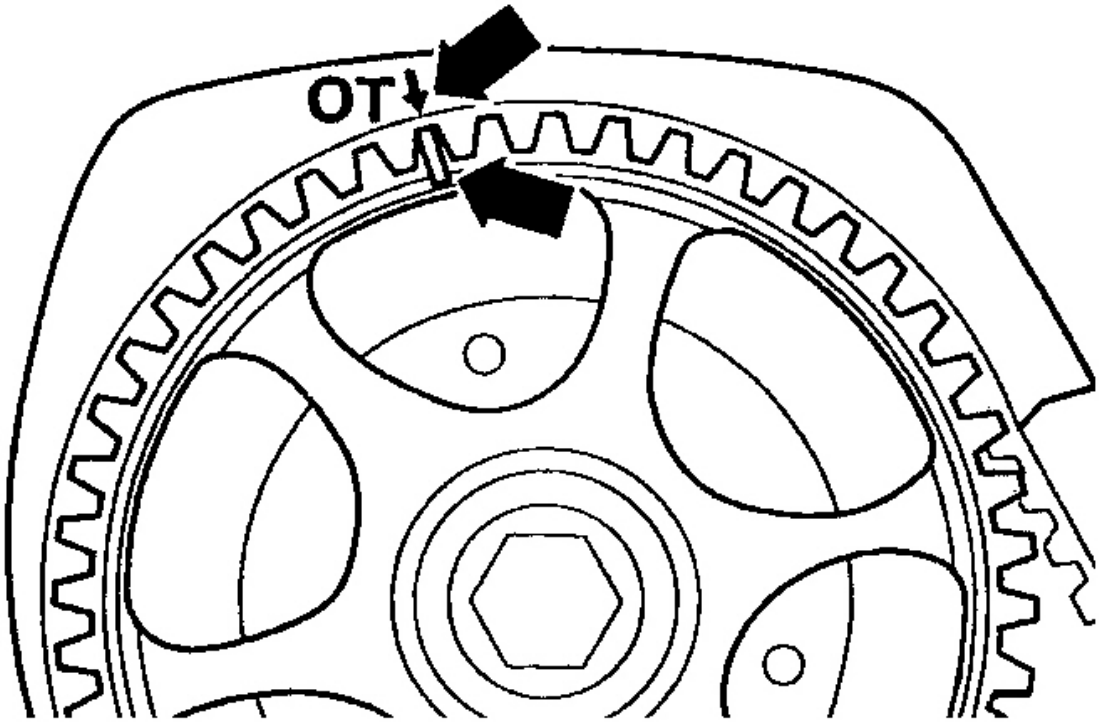


Fig. 4: Exploded View Of Timing Belt & Components (AEG, AVH, AZG, BDC & BEV Engine Codes)
Courtesy of VOLKSWAGEN UNITED STATES, INC.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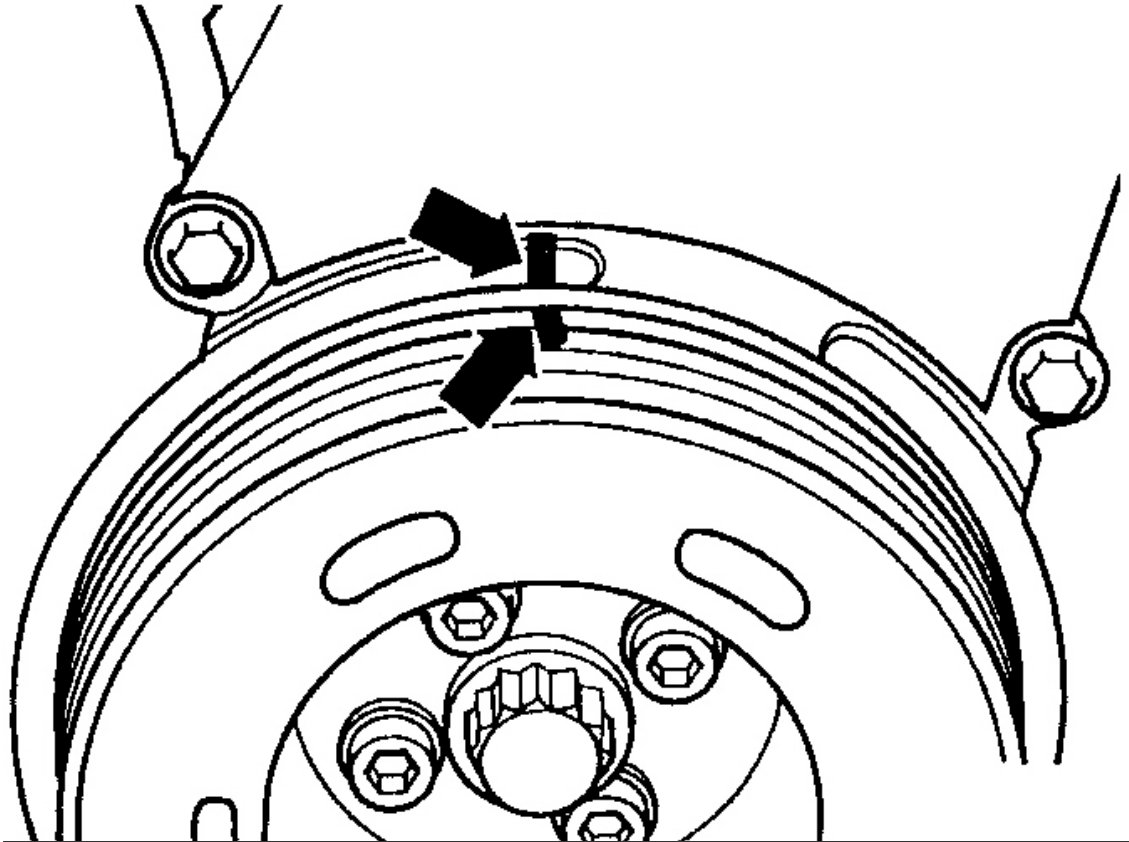
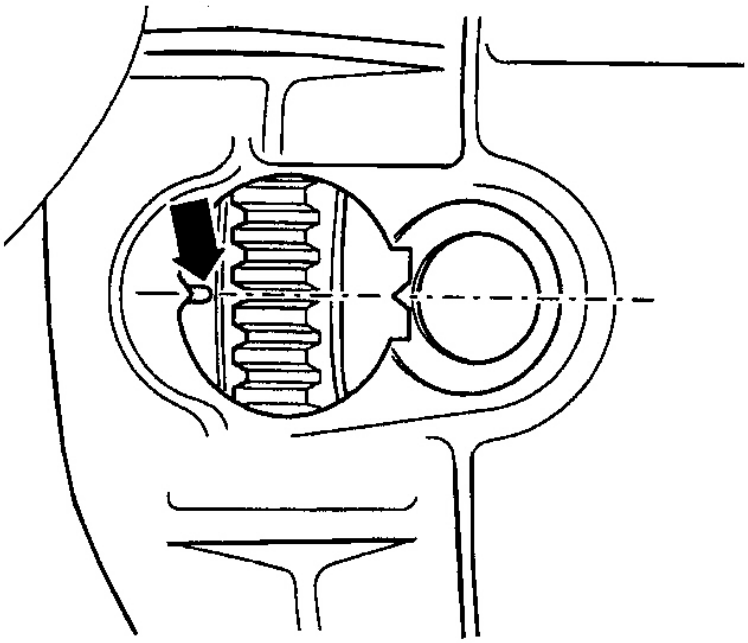
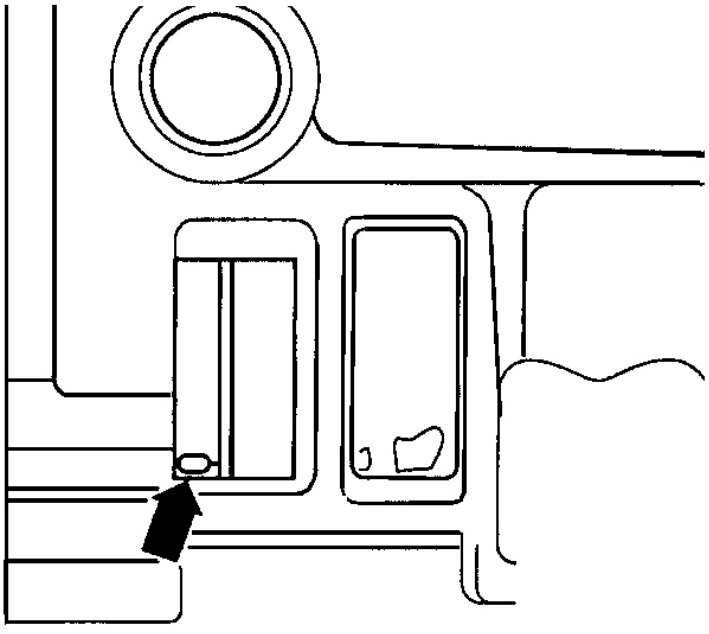


Fig. 5: Aligning Crankshaft & Camshaft Timing Marks
Courtesy of VOLKSWAGEN UNITED STATES, INC.



MANUAL TRANSMISSION



AUTOMATIC TRANSMISSION

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Fig. 6: Locating TDC Mark on Transaxle

Courtesy of VOLKSWAGEN UNITED STATES, INC.

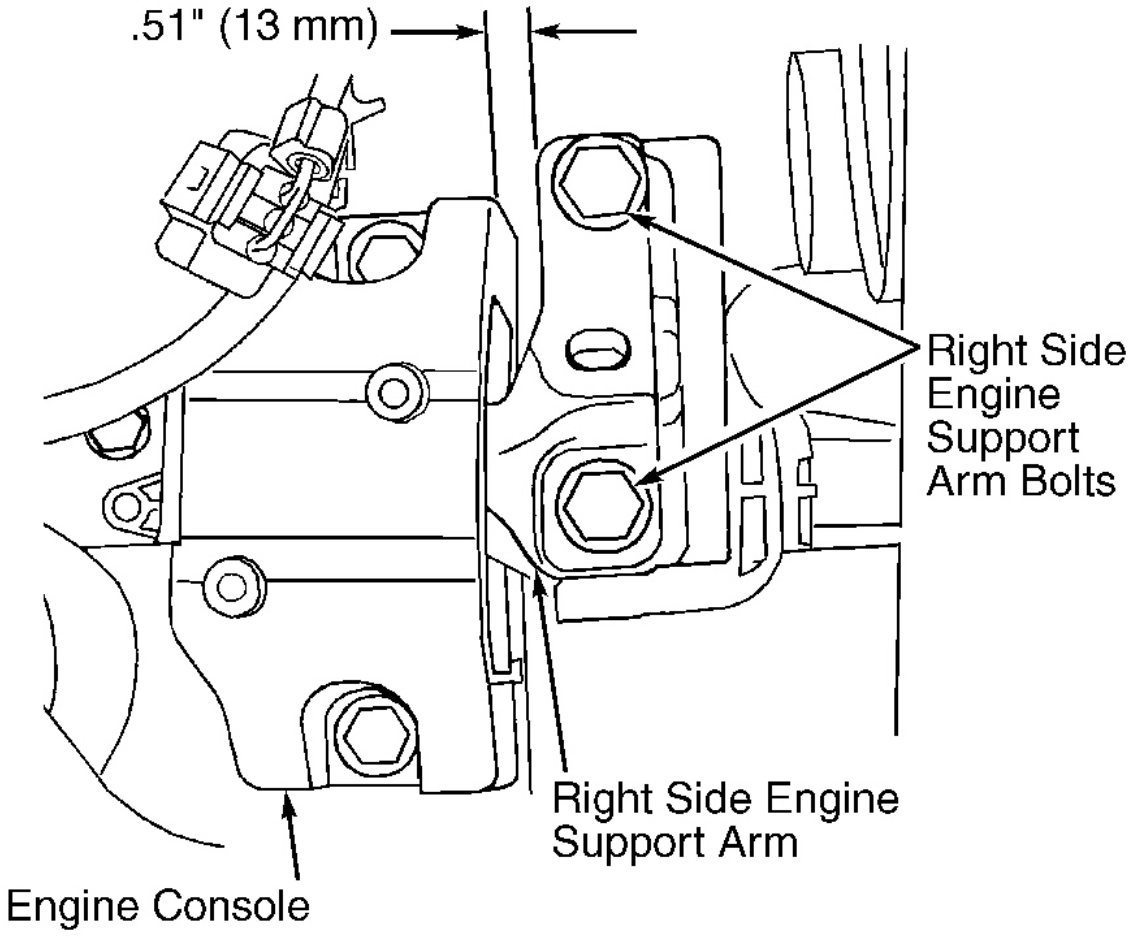

Fig. 7: Identifying Right-Hand Engine Mount
Courtesy of VOLKSWAGEN UNITED STATES, INC.

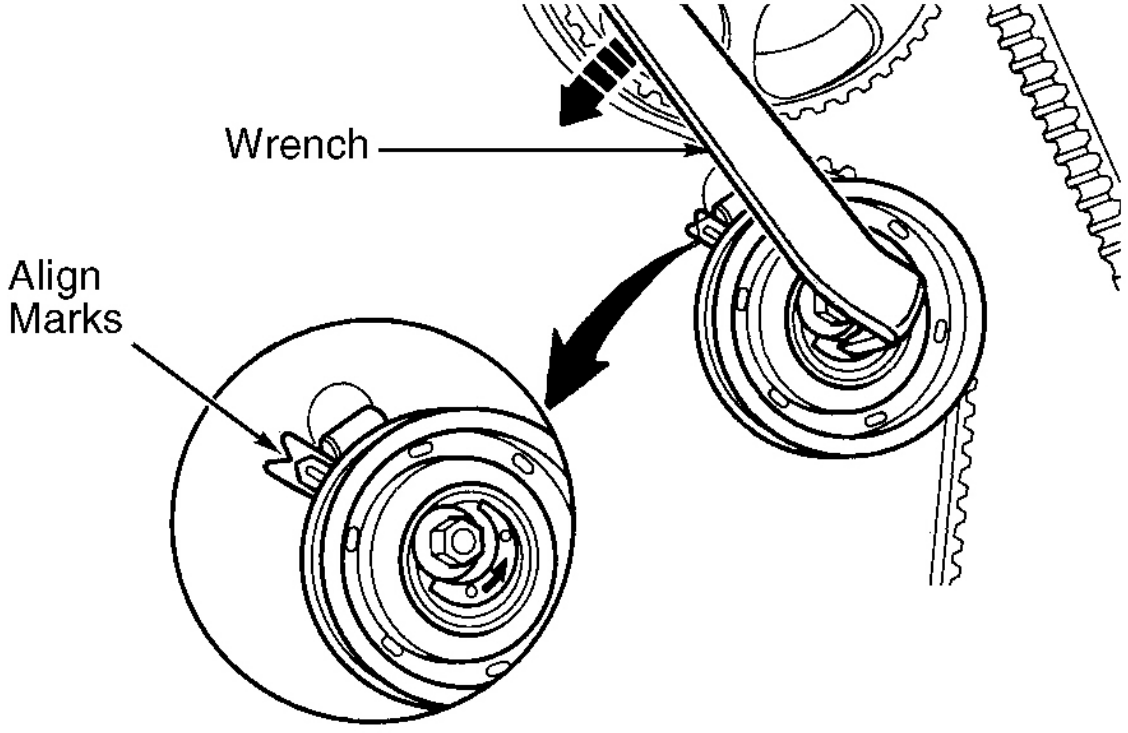

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Fig. 8: Releasing/Adjusting Timing Belt Tension
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Installation (AEG, AVH, AZG, BDC & BEV Engine Codes)

1. Ensure crankshaft and camshaft timing marks are still aligned. See **Fig. 5** and **Fig. 6** .
2. Install timing belt around crankshaft and water pump sprockets. Install engine support on front of engine block. Tighten mounting bolts to specification. See **TORQUE SPECIFICATIONS** .
3. Install timing belt lower and center covers. Install crankshaft pulley and tighten bolts to specification. Install engine mount-to-body and engine support. Remove floor jack or engine support bar from engine.
4. Install timing belt on camshaft sprocket and timing belt tensioner. Make sure there is no slack in timing belt.
5. To tension timing belt, engine must be at most warm to the touch. Rotate tensioner pulley counterclockwise until tensioner arrow is aligned with cut-out on cylinder head. See **Fig. 8** .
6. Tighten tensioner pulley center nut to specification. Rotate crankshaft 2 revolutions in normal direction of rotation, and recheck check belt tension. Adjust tension as necessary. Recheck all timing marks again.
7. Install upper timing belt cover. Install serpentine belt tensioner and serpentine belt. To complete installation, reverse removal procedure. Tighten all fasteners to specification. See **TORQUE SPECIFICATIONS** .

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Camshaft Sprocket Bolt	74 (100)
Camshaft Sprocket Sealing Plug	18 (25)
Crankshaft Pulley Socket-Head Bolts	
Golf, GTI & Jetta	30 (40)
New Beetle	18 (25)
Crankshaft Sprocket Center Bolt	(1) , (2) 66 (90)
Engine Mounting Bolts	
Engine Support-To-Engine Block	33 (45)
Mounting Bracket-To-Body (Small Bolt)	18 (25)
Mounting Bracket-To-Body Bolts (Large Bolts) (1)	(2)
Mount-To-Body	74 (100)
Serpentine Belt Tensioner Bolt	18 (25)
Timing Belt Tensioner Center Nut	15 (20)
Water Pump Bolt	11 (15)
	INCH Lbs. (N.m)
Timing Belt Cover Bolt	89 (10)
Valve Cover Retaining Nut	89 (10)

(1) Replace torque-to-yield bolt on installation.

(2) First tighten to (40 N.m), then tighten bolts an additional 90 degrees (1/4 turn).

MANUFACTURER'S SUGGESTED SCHEDULED MAINTENANCE

The manufacturer suggests the timing belt AND tensioner be replaced at 105,000 mile intervals.

REMOVAL & INSTALLATION

CAUTION: This application is an interference engine. Do not rotate camshaft or crankshaft when timing belt is removed, or engine damage may occur.

TIMING BELT

Removal

1. Remove engine cover. Remove noise insulation pan from under engine compartment.
2. Remove air duct pipe between turbocharger and charge air cooler. See **Fig. 1** . Air duct pipe is located along bottom right of cross member.

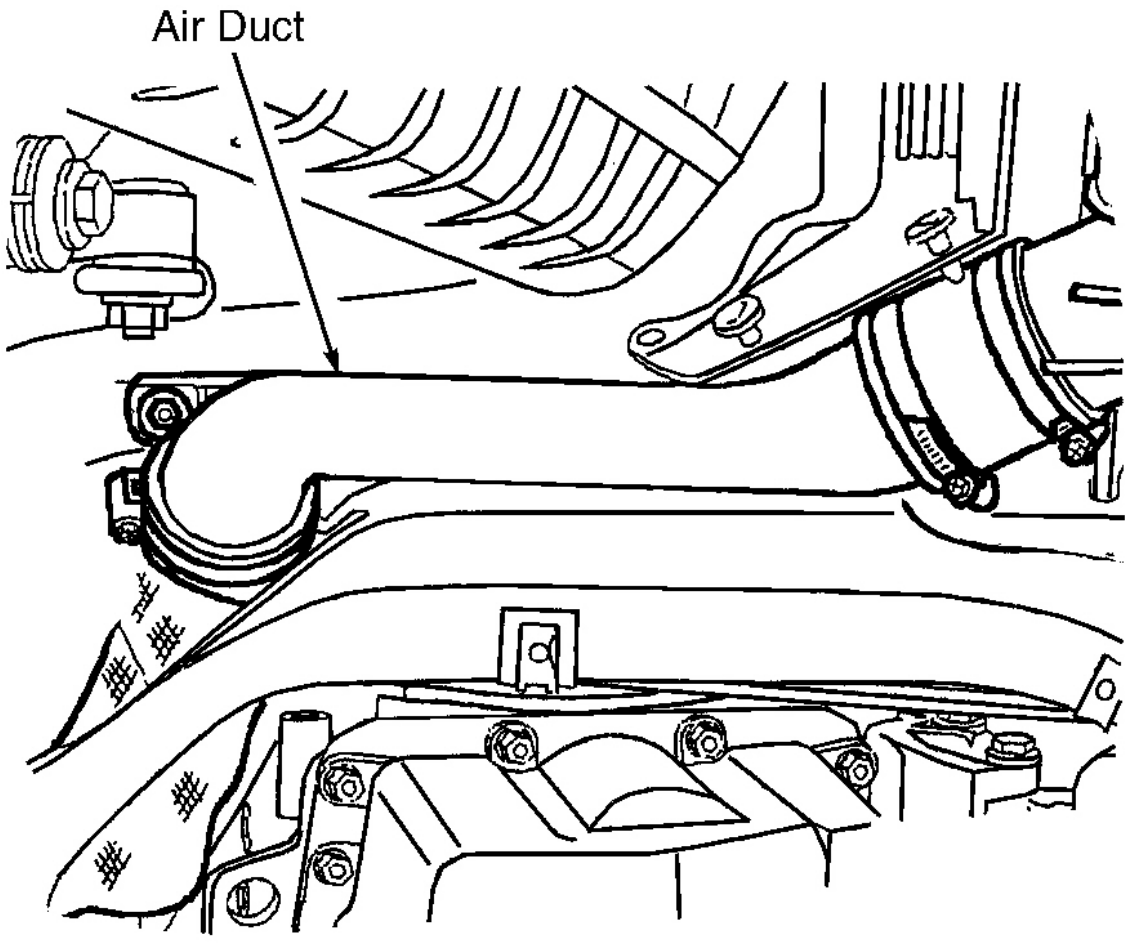

Fig. 1: Identifying Air Duct
Courtesy of VOLKSWAGEN UNITED STATES, INC.

3. Mark rotation direction of serpentine drive belt. Move serpentine drive belt tensioner as shown to release tension on belt. See **Fig. 2** . Secure tensioner using a drift, about .18" (4.5 mm) x 2.2" (55 mm). See **Fig. 3** . Remove serpentine drive belt. Remove serpentine drive belt tensioner.

NOTE: On vehicles without headlight cleaning system, Connecting Rod Support (3090) can also be used to secure tensioner.

4. Rotate crankshaft so that No. 1 cylinder is at TDC of compression stroke. Ensure that TDC marks on flywheel and bellhousing are aligned. See **Fig. 4** or **Fig. 5** .
5. Remove coolant expansion tank and set aside. Label all vacuum hoses for reassembly reference, and disconnect vacuum hoses from fuel evaporative canister. Disconnect vacuum hoses at throttle body.
6. Remove upper timing belt cover. See **Fig. 6** .
7. Attach Engine Support Bridge (10-222A) with Bracket (10222), and engage retainer in right lifting eye bolt located at cylinder head. Lift engine slightly to remove weight from engine mounts. Engine may also be supported from below with a floor jack.

8.

CAUTION: Engine mount assembly is secured by torque-to-yield bold. Crankshaft pulley CENTER bolt is also a torque-to-yield bolt. These bolts MUST be replaced if they are loosened or removed.

Remove bolts from engine mount assembly at timing belt end of engine. Remove engine mount.

9. Remove 4 crankshaft pulley socket-head bolts. Remove crankshaft pulley. It is NOT necessary to remove crankshaft pulley center bolt.
10. Remove lower and middle timing belt covers. Remove engine bracket from engine block. See **Fig. 7** . If reusing old timing belt, mark timing belt with arrow to indicate original direction of rotation.
11. Screw Tensioning Bolt (T10092) or M5 x 55 x 1 stud into timing belt tensioner bracket. See **Fig. 8** . Install hex nut and washer onto stud.
12. SLOWLY turn hex nut on stud to compress timing belt tensioner. Compress tensioner just enough so that Locking Pin (T40011) or drill bit can be inserted through the tensioner body, locking the tensioner in place.
13.

CAUTION: When turning camshaft, crankshaft must not be at TDC, or there is a potential for valves to contact pistons. Install timing belt when engine is cold or lukewarm.

Remove timing belt. Turn crankshaft back just slightly to ensure that crankshaft is not at TDC for any cylinder in case camshaft moves.

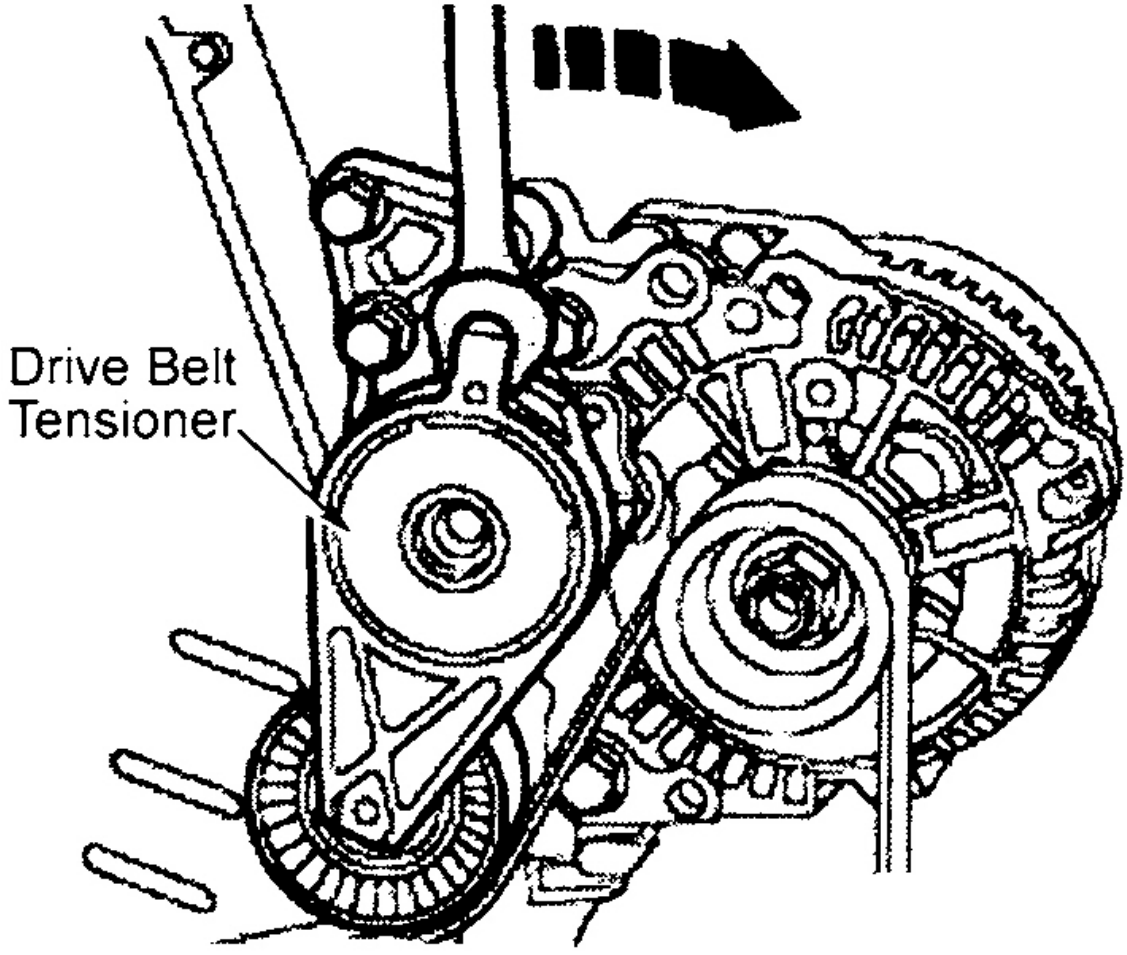

Fig. 2: Releasing Serpentine Drive Belt Tension (1 Of 2)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

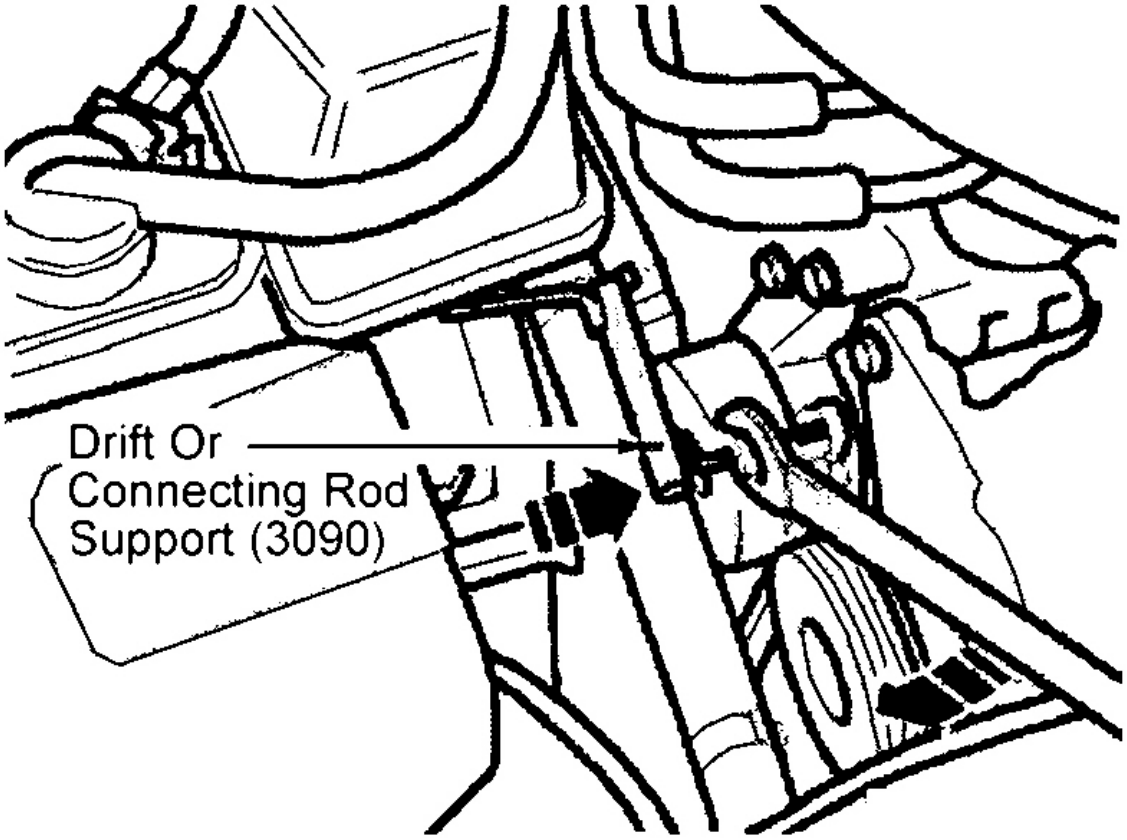

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Fig. 3: Releasing Serpentine Drive Belt Tension (2 Of 2)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

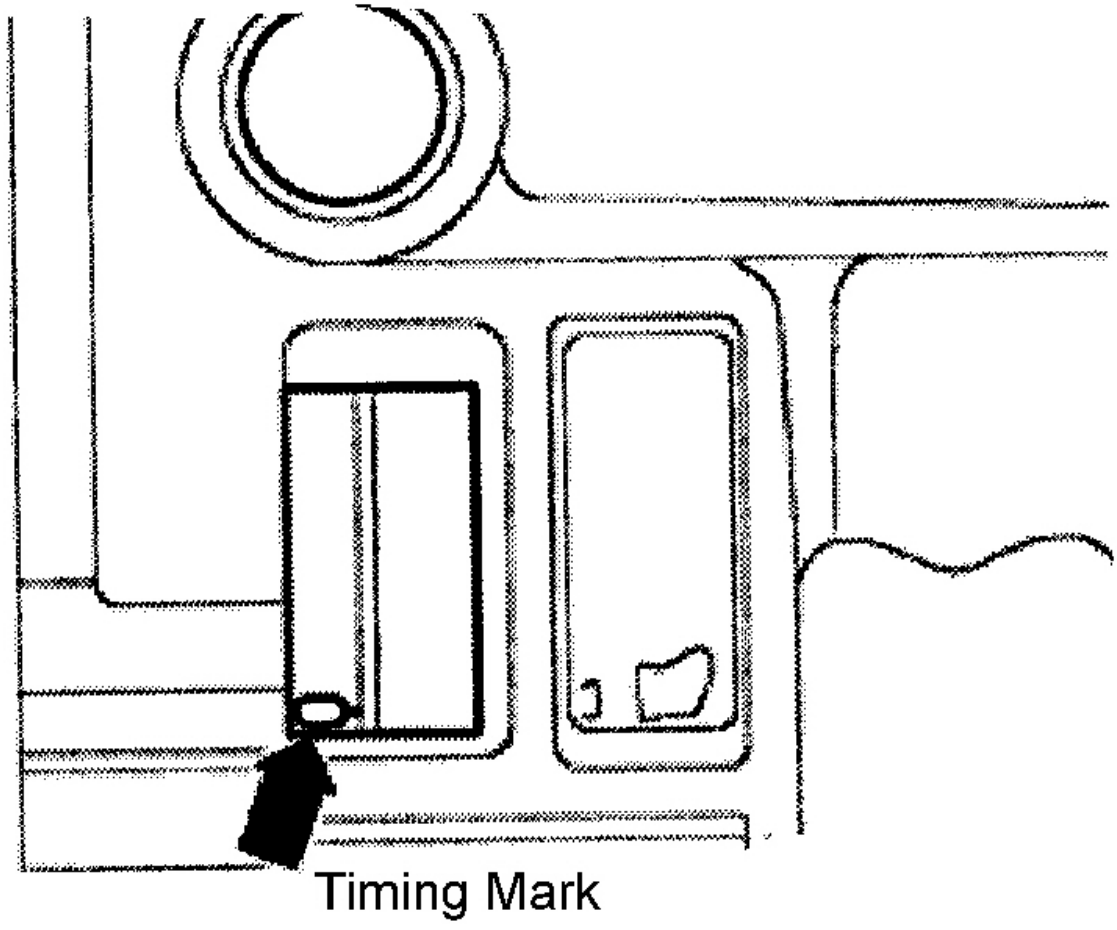

Fig. 4: Setting Crankshaft to TDC (Automatic Transmission)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

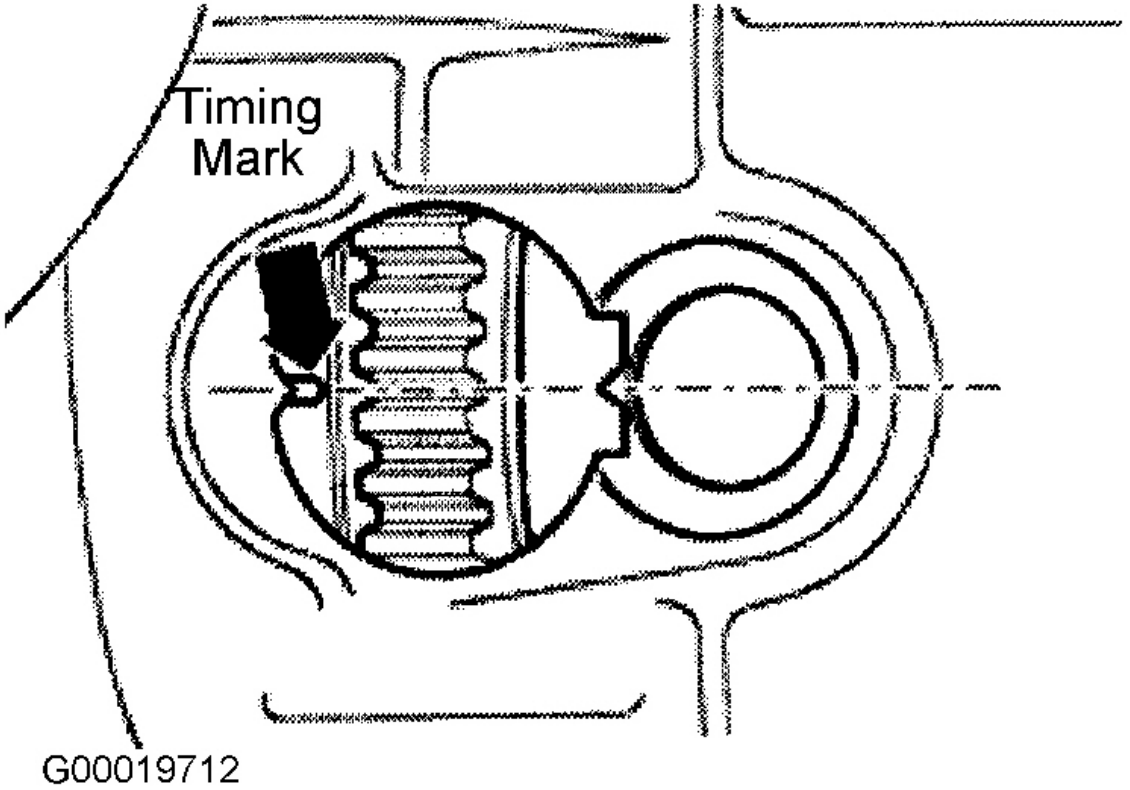

Fig. 5: Setting Crankshaft to TDC (Manual Transmission)
Courtesy of VOLKSWAGEN UNITED STATES, INC.

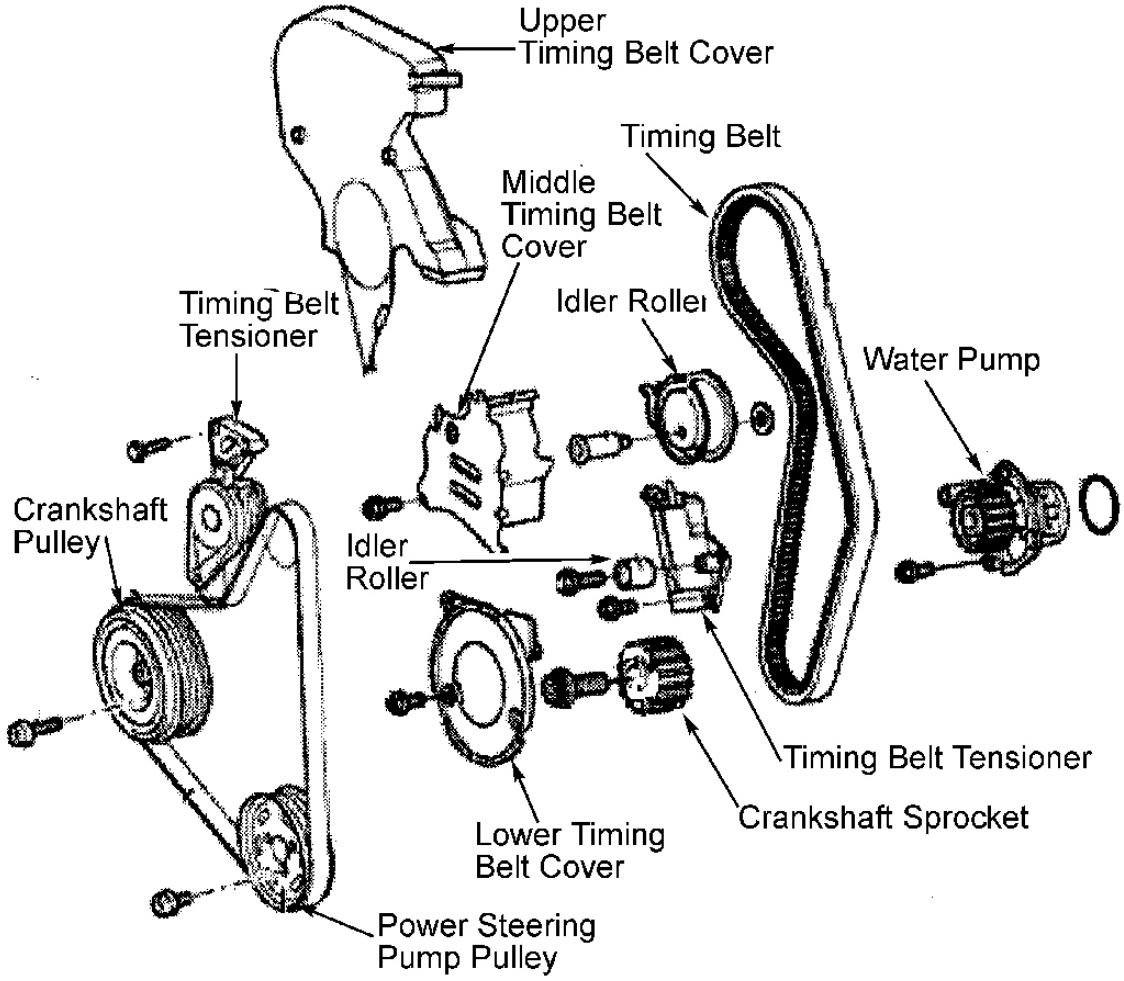

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Fig. 6: Exploded View of Timing Belt & Components

Courtesy of VOLKSWAGEN UNITED STATES, INC.

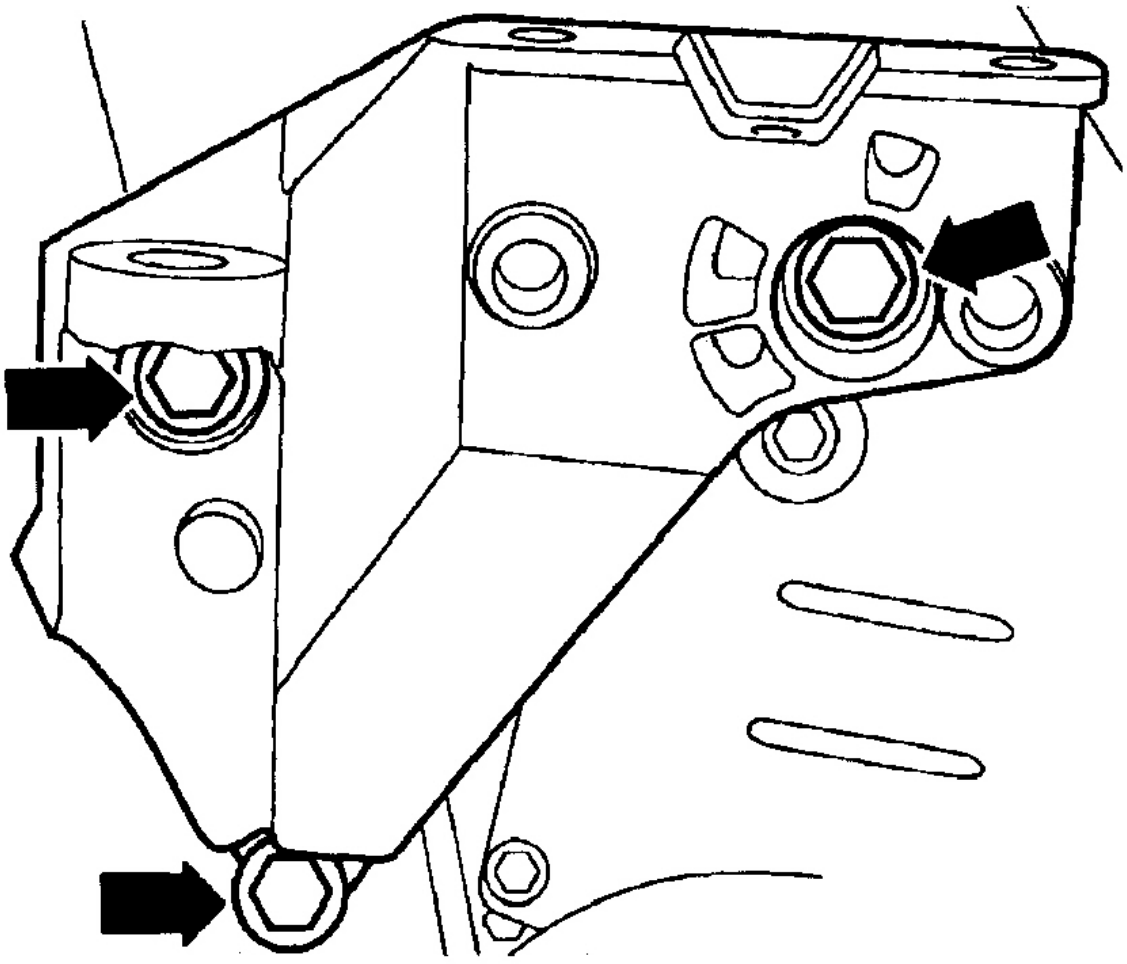

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Fig. 7: Locating Engine Bracket-To-Block Bolts
Courtesy of VOLKSWAGEN UNITED STATES, INC.

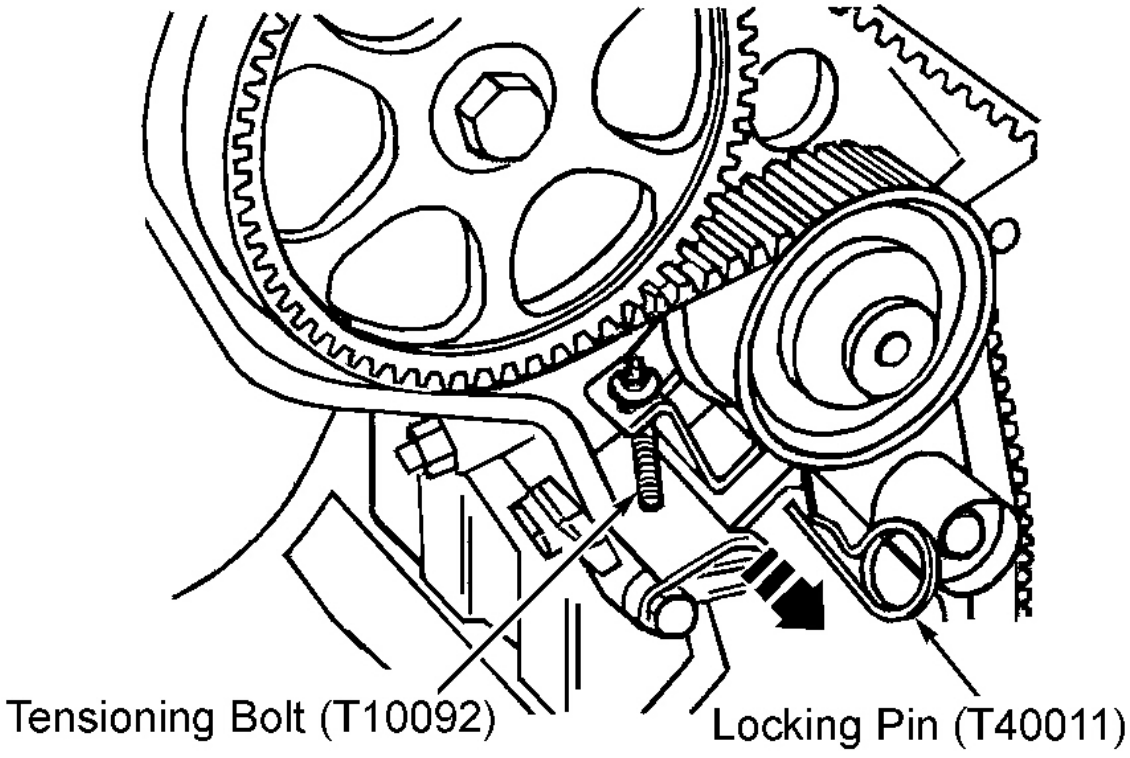

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Fig. 8: Installing Timing Belt Tensioner Locking Pin
Courtesy of VOLKSWAGEN UNITED STATES, INC.

Installation

1. Ensure camshaft is still at TDC of compression stroke for No. 1 cylinder. Align timing marks on camshaft sprocket with mark on cylinder head cover. See **Fig. 9** .
2. **NOTE: Before installing engine mount, insert bolts into engine mount.**

   Install timing belt around crankshaft sprocket. If installing used belt, ensure it is installed in original direction of rotation. Install engine mount bracket to block. Install lower timing belt guard. Use Locking Fluid (D 000 600 A2) on lower timing belt cover bolts. Install crankshaft pulley, and tighten bolts to specification. See **TORQUE SPECIFICATIONS** .
3. Rotate crankshaft to TDC No. 1 cylinder. See **Fig. 9** . Place timing belt on water pump, tensioner pulley and camshaft sprocket.
4. Remove Locking Pin (T40011) or drill bit and unscrew Tensioning Bolt (T10092). See **Fig. 8** .
5. Turn crankshaft 2 revolutions, and check that camshaft and crankshaft marks align properly. See **Fig. 9** .
6. Install middle and upper timing belt covers. Tighten bolts to specification. See **TORQUE SPECIFICATIONS** .
7. Install engine mount to engine bracket and body using NEW bolts. Adjust engine mount clearance. See **Fig. 10** .

8. Remove engine support bridge or floor jack. Install serpentine drive belt tensioner. Install serpentine drive belt. Install the A/C compressor drive belt (if equipped). Ensure used belts are installed in original direction of rotation.
9. To complete installation, reverse remaining removal procedure. Tighten all fasteners to specification. See **TORQUE SPECIFICATIONS** .

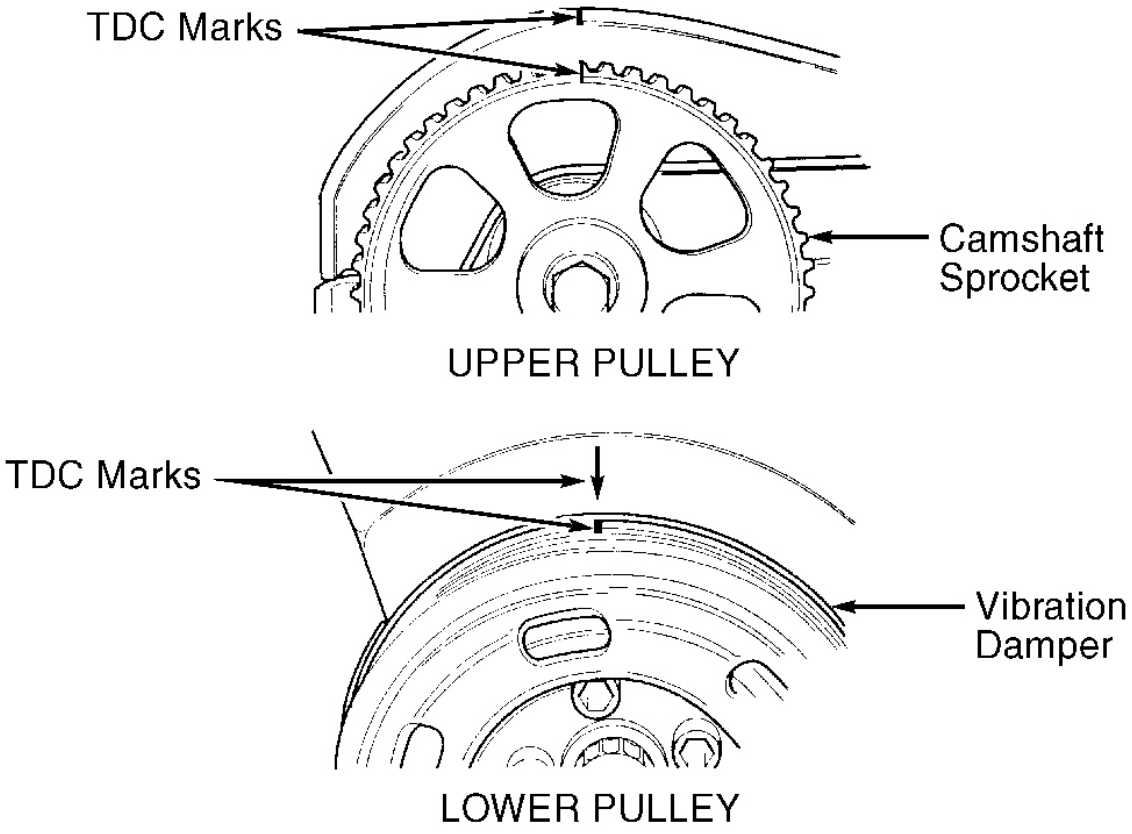

Fig. 9: Aligning Camshaft & Crankshaft Timing Marks
Courtesy of AUDI OF AMERICA, INC.

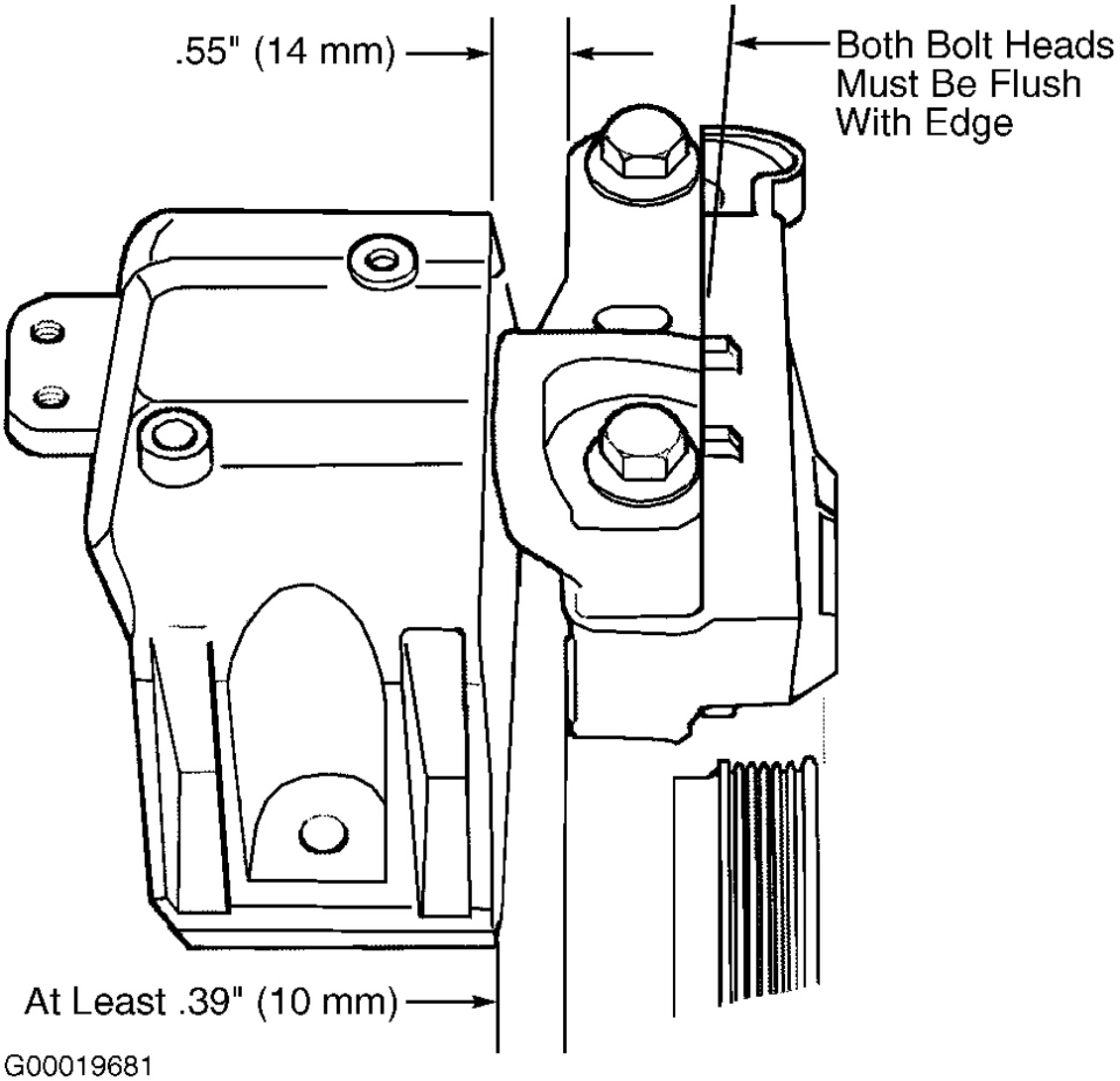

Fig. 10: Adjusting Engine Mount Clearance
Courtesy of VOLKSWAGEN UNITED STATES, INC.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Application	**Ft. Lbs. (N.m)**
Camshaft Sprocket Bolt	59 (80)
Crankshaft Pulley Bolt	18 (25)
Crankshaft Sprocket Center Bolt (1)	
Step 1	66 (90)
Step 2	Plus 1/4 Turn (90 Degrees
Engine Mount Bracket-To-Engine	33 (45)
Engine Mount-To-Body (1)	

Step 1	30 (40)
Step 2	Plus 1/4 Turn (90 Degrees
Engine Mount-To-Engine Bracket (1)	
Step 1	44 (60)
Step 2	Plus 1/4 Turn (90 Degrees
Serpentine Drive Belt Tensioner Bolt	18 (25)
Timing Belt Cover Bolt	15 (20)
Timing Belt Idler Pulley Bolt	15 (20)
Timing Belt Tensioner Mount Bolt	11 (15)
Timing Belt Tensioner Pulley Bolt	18 (25)
Water Pump Bolt	11 (15)
(1) Replace bolts if loosened or removed.	